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Structure of heme

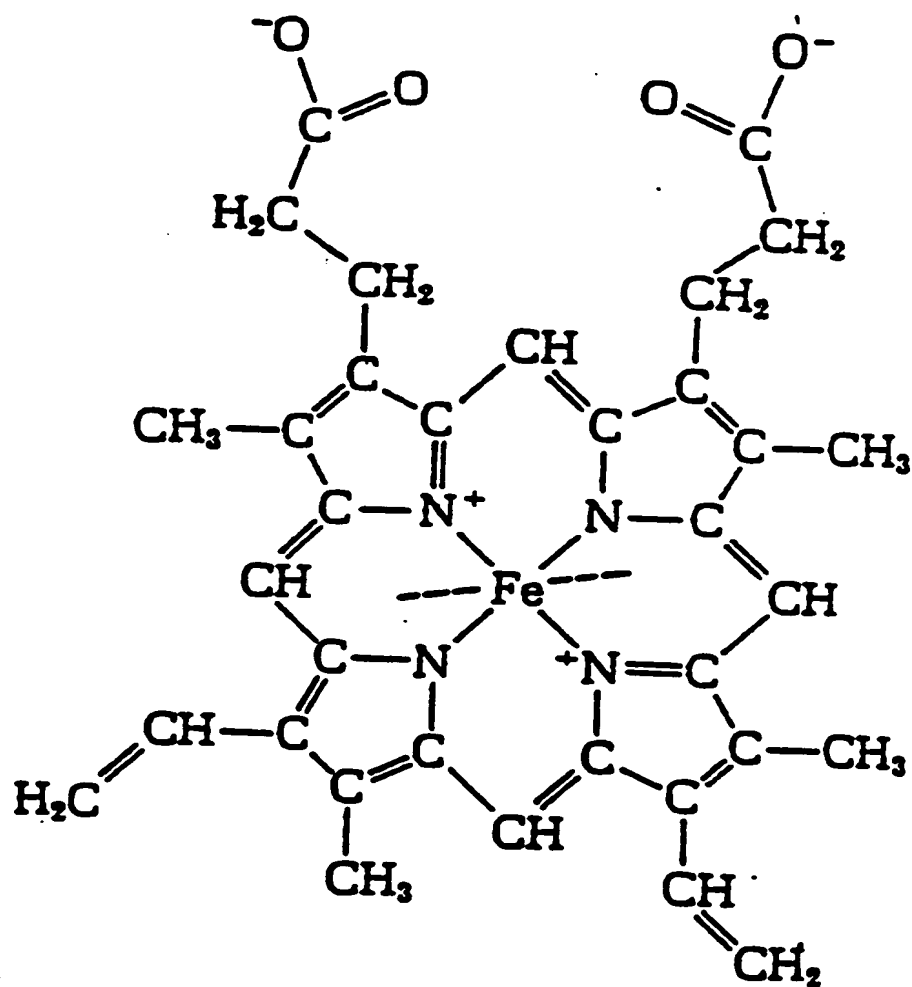


FIGURE 1

Alpha globin sequence:

1	GTG CTG TCT CCT GCG GAC AAG ACC AAC GTC AAG GCG GCG TGG GCG	45
	Val Leu Ser Pro Ala Asp Lys Thr Asn Val Lys Ala Ala Trp Gly	
46	AAG GTT GCG CAC GCT GCG GAG TAT GGT GCG GAG GCG CTG GAG	90
	Lys Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu	
91	AGG ATG TTC CTG TCC TTC CCC ACC ACC AAG ACC TAC TTC CCG CAC	135
	Arg Met Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His	
136	TTC GAC CTG AGC CAC GCG TCT GCG CAG GTT AAG GCG CAC GCG AAG	180
	Phe Asp Leu Ser Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys	
181	AAG GTG GCG GAC GCG CTG ACC AAC GCG GTG GCG CAC GTG GAC GAC	225
	Lys Val Ala Asp Ala Leu Thr Asn Ala Val Ala His Val Asp Asp	
226	ATG CCC AAC GCG CTG TCC GCG CTG AGC GAC CTG CAC GCG CAC AAG	270
	Met Pro Asn Ala Leu Ser Ala Leu Ser Asp Leu His Ala His Lys	
271	CTT CCG GTG GAC CCG CTG AAC TTC AAG CTC CTA AGC CAC TGC CTG	315
	Leu Arg Val Asp Pro Val Asn Phe Lys Leu Leu Ser His Cys Leu	
316	CTG GTG ACC CTG GCG GCG CAC CTC CCC GCG GAG TTC ACC CCT GCG	360
	Leu Val Thr Leu Ala Ala His Leu Pro Ala Glu Phe Thr Pro Ala	
361	GTG CAC GCG TCC CTG GAC AAG TTC CTG GCT TCT GTG AGC ACC GTG	405
	Val His Ala Ser Leu Asp Lys Phe Leu Ala Ser Val Ser Thr Val	
408	CTG ACC TCC AAA TAC CGT	
	Leu Thr Ser Lys Tyr Arg	

FIGURE 2

Beta globin sequence:

1	GTG CAC CTG ACT CCT GAG GAG AAG TCT GGC GTT ACT GGC CTG TGG	45
	Val His Leu Thr Pro Glu Glu Lys Ser Ala Val Thr Ala Leu Trp	
46	GGC AAG GTG AAC GTG GAT GAA GTT GGT GAG GGC CTG GGC AGG	90
	Gly Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg	
91	CTG CTG GTT GTC TAC CCT TGG ACC CAG AGG TTC TTT GAG TCC TTT	135
	Leu Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe	
136	GGG GAT CTG TCC ACT CCT GAT GCT GTT ATG GGC AAC CCT AAG GTG	180
	Gly Asp Leu Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val	
181	AAG GCT CAT GGC AAG AAA GTG CTC GGT GGC TTT AGT GAT GGC CTG	225
	Lys Ala His Gly Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu	
226	GCT CAC CTG GAC AAC CTC AAG GGC ACC TTT GGC ACA CTG AGT GAG	270
	Ala His Leu Asp Asn Leu Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu	
271	CTG CAC TGT GAC AAG CTG CAC GTG GAT CCT GAG AAC TTC AGG CTC	315
	Leu His Cys Asp Lys Leu His Val Asp Pro Glu Asn Phe Arg Leu	
316	CTG GGC AAC GTG CTG GTC TGT GTG CTG GGC CAT CAC TTT GGC AAA	360
	Leu Gly Asn Val Leu Val Cys Val Leu Ala His Phe Gly Lys	
361	GAA TTC ACC CCA CCA GTG CAG GCT GGC TAT CAG AAA GTG GTG GCT	405
	Glu Phe Thr Pro Pro Val Gln Ala Ala Tyr Gln Lys Val Val Ala	
406	GGT GTG GCT AAT GGC CTA GGC CAC AAG TAT CAC	
	Gly Val Ala Asn Ala Leu Ala His Lys Tyr His	

FIGURE 3

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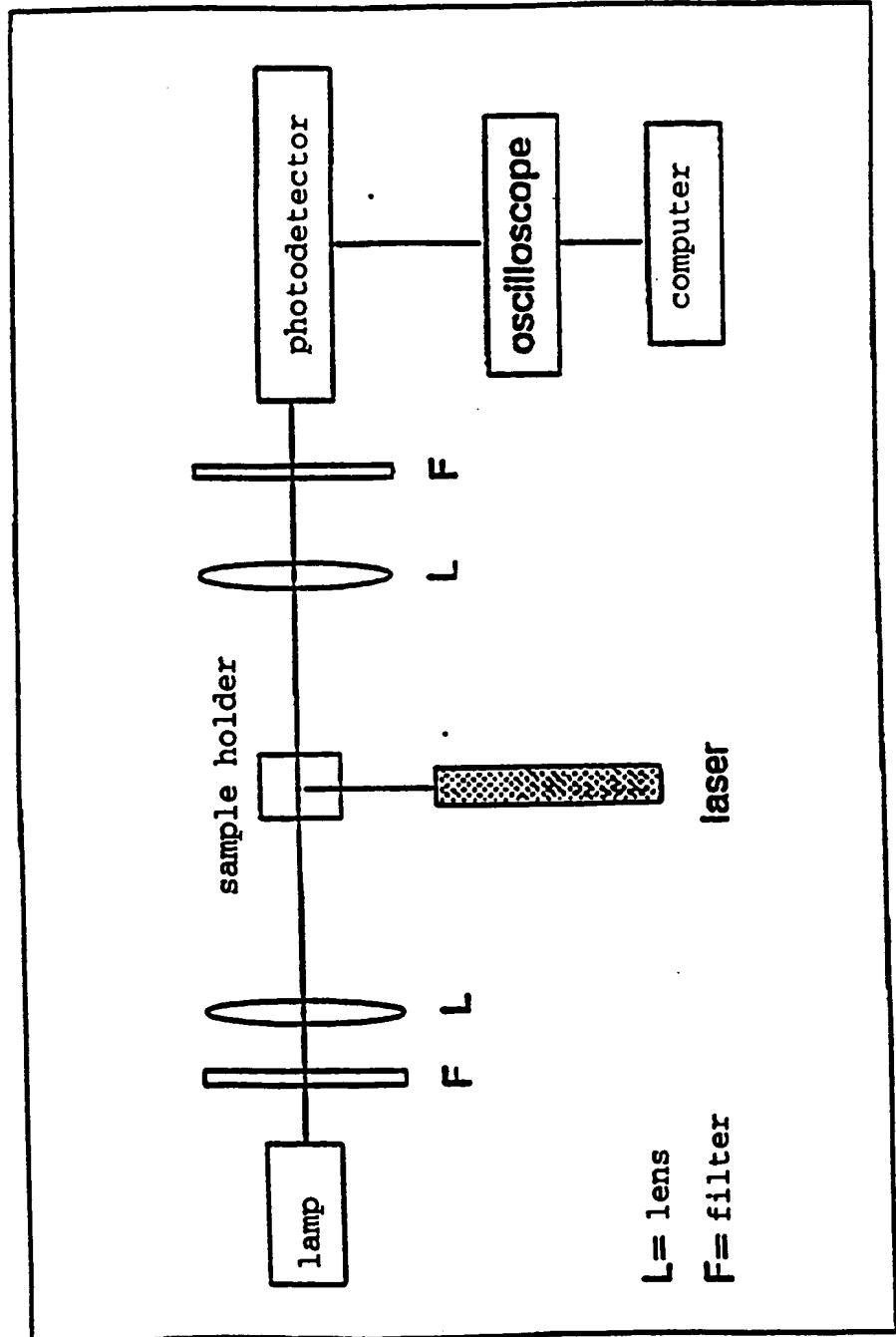


FIGURE 4

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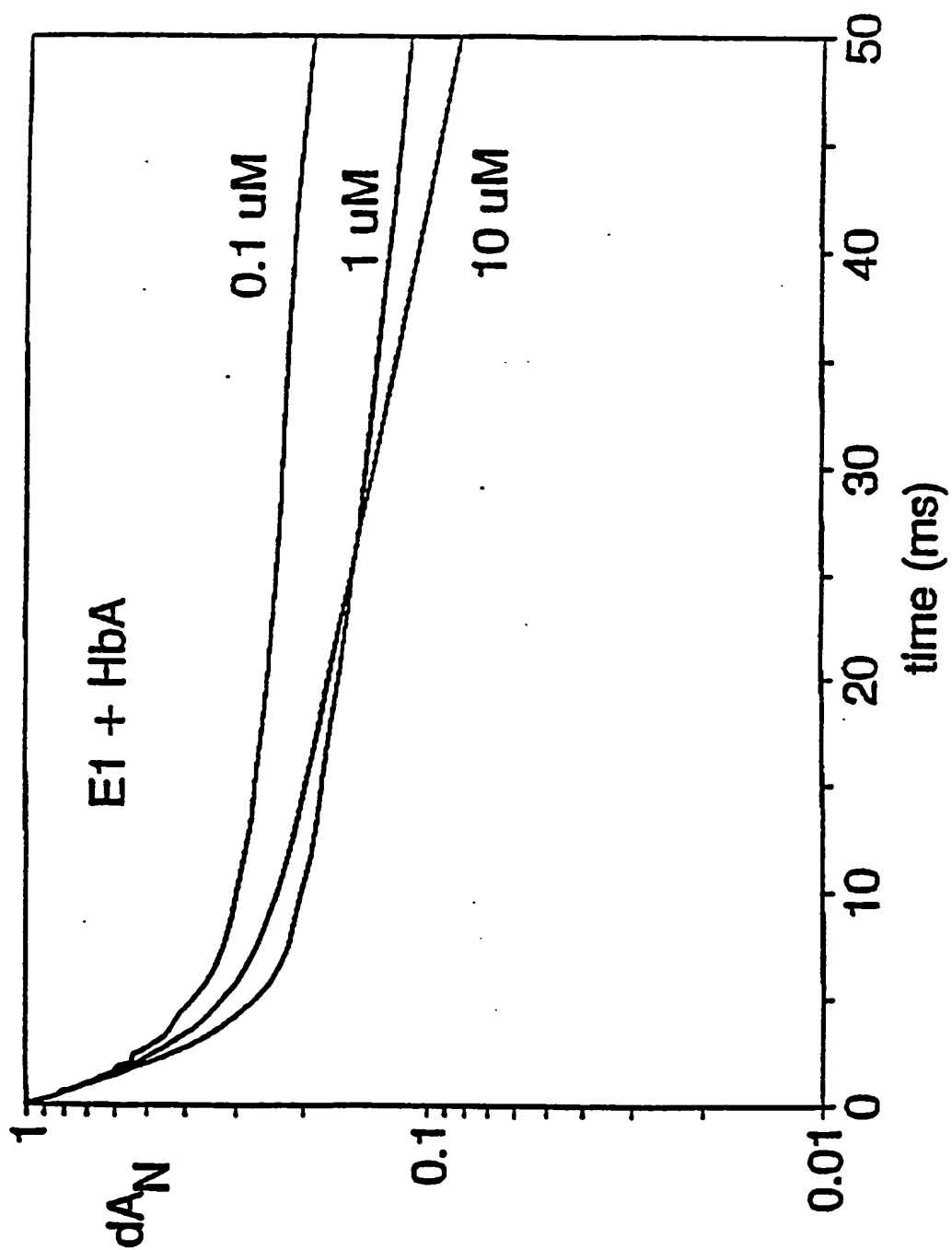


FIGURE 5

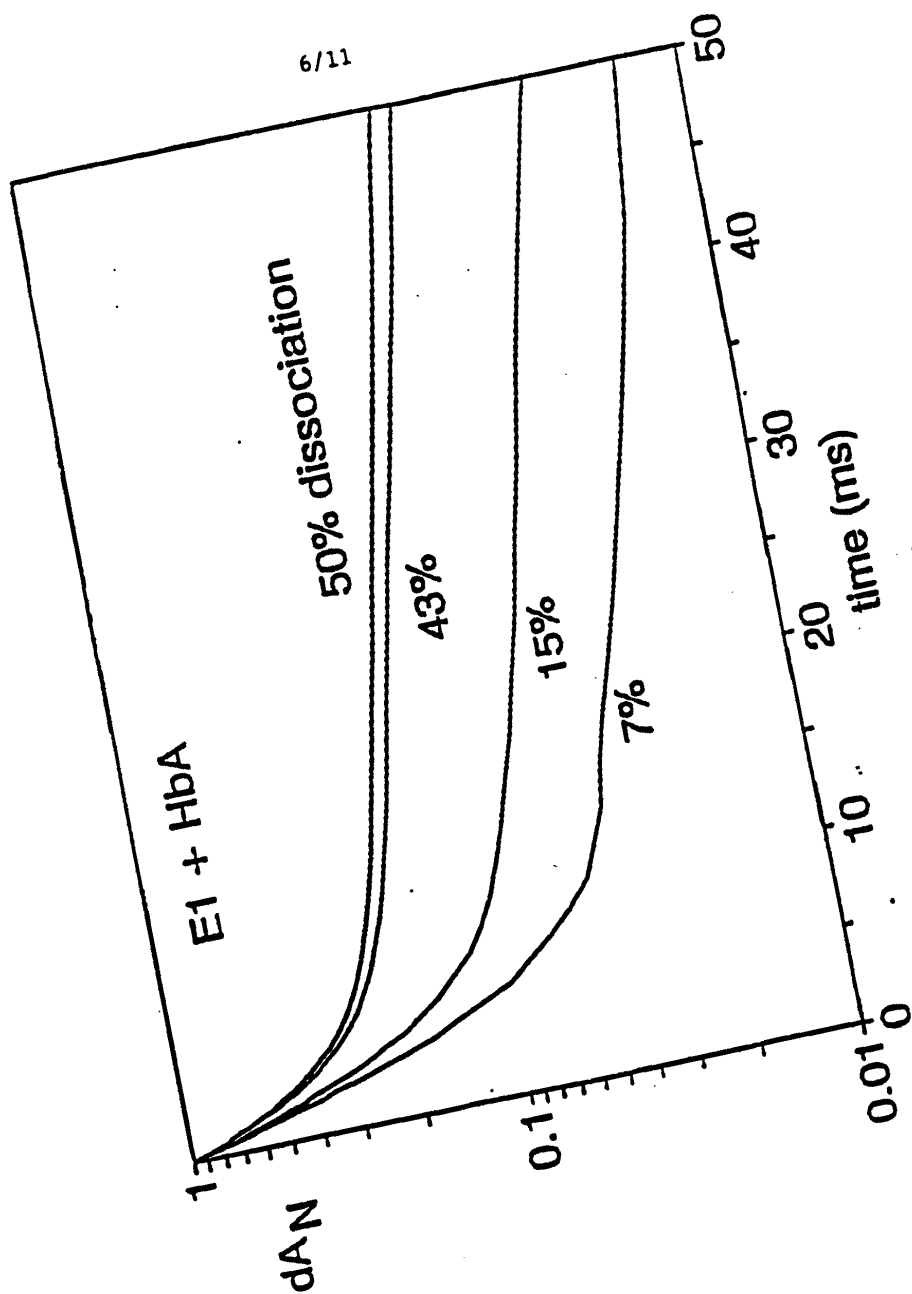


FIGURE 6

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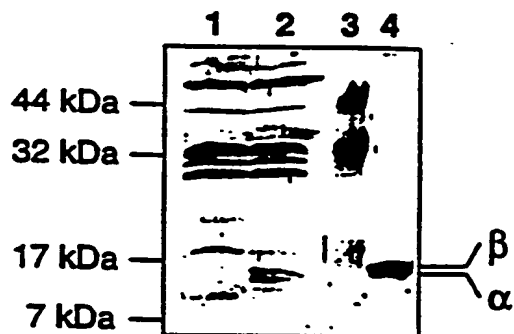


FIGURE 7

FIGURE 8

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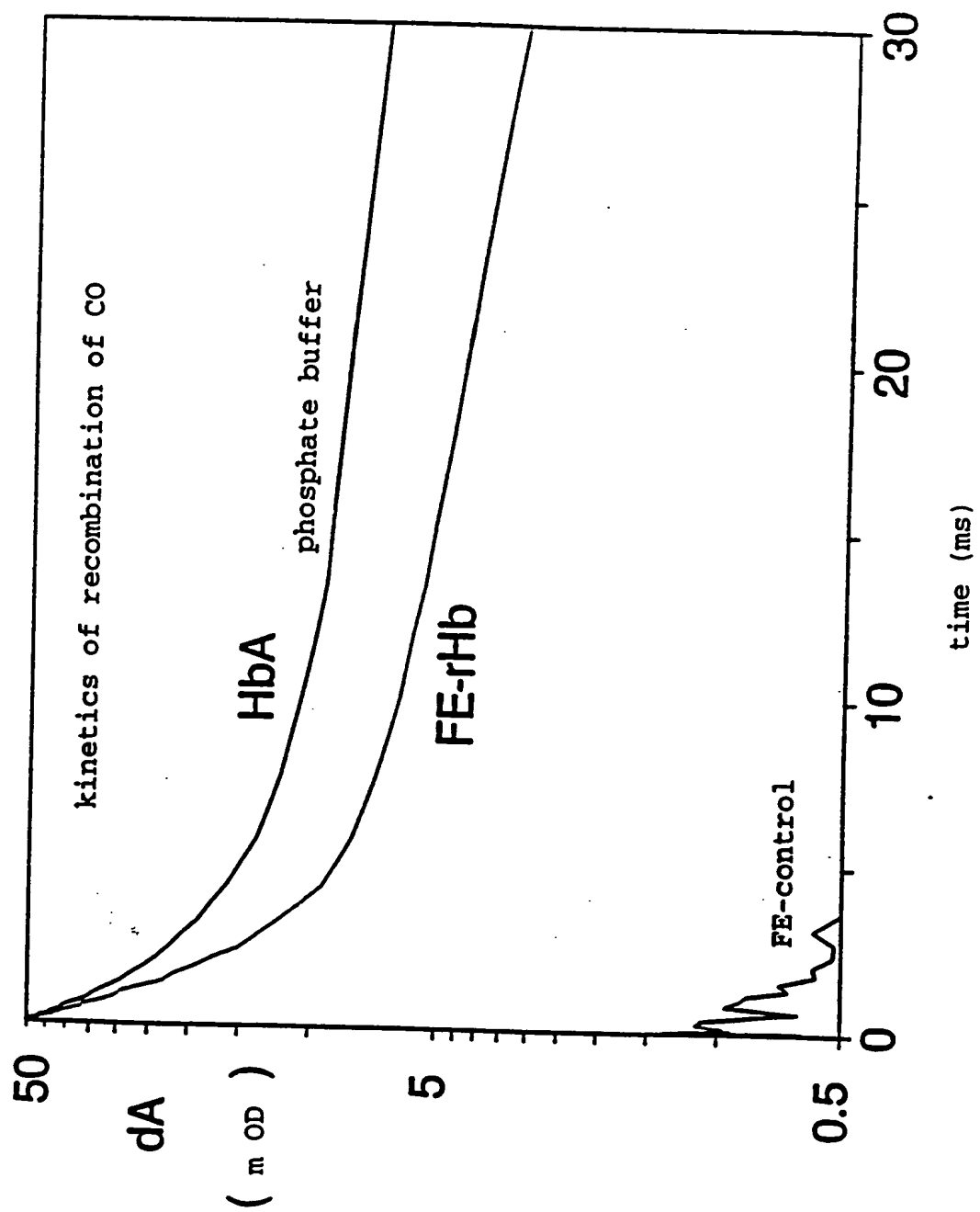


FIGURE 9

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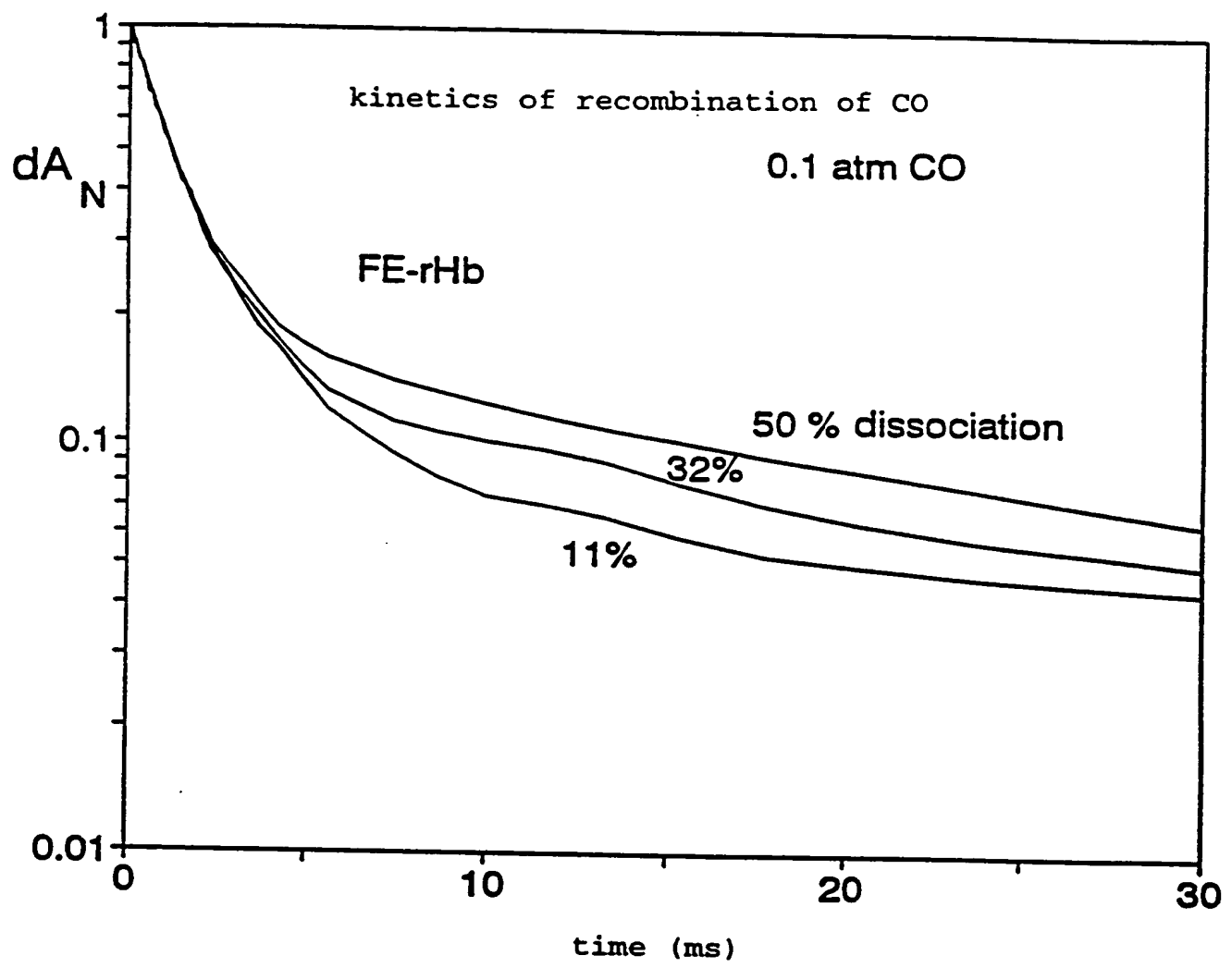


FIGURE 10

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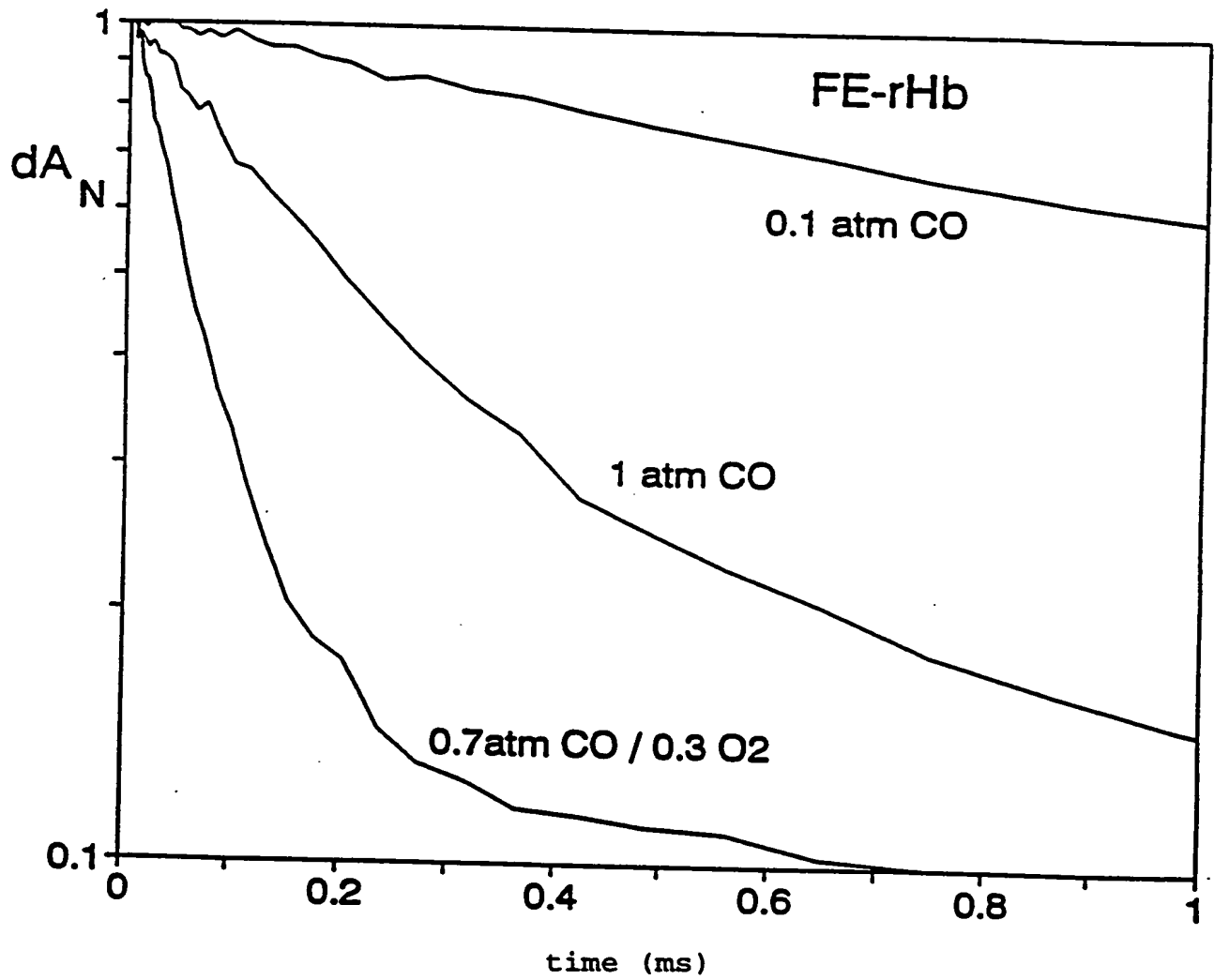


FIGURE 11